KANAN SHAH

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SUMMARY

Software Engineer with a focus on full-stack and generative AI product development. Shipped and iterated on production apps in both startup and government settings. Hands-on with OpenAI, Pinecone, Next.js, Node.js, and automation pipelines. Thrive in high-ownership roles, enjoy rapid prototyping, and prioritize impactful solutions over perfection.

EDUCATION

California State University, Sacramento. **Jan 2021 – May 2025**
Bachelor of Science in Computer Science

Coursework: Database Management Systems, Data Structures and Algorithms, Artificial Intelligence, Data Analytics and Mining Operating Systems, Machine Learning, Software Engineering, Object Oriented Programming

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, SQL, Bash, PowerShell,
Framework & Tools: Spring Boot, Next.js, React.js, Django, REST APIs, Firebase
Cloud & DevOps: Azure, Docker, Kubernetes, Git
Web Tech & Database: MySQL, HTML5, CSS, Bootstrap, Material-UI
Security & Testing: OAuth, SSL/TLS, Jest, JUnit, Selenium, Postman
Other: Microsoft 365, Jira, Trello, Slack

EXPERIENCE

Software Engineering Intern | California Department Of Public Health, Sacramento **Feb 2024 – Dec 2024**

- Spearheaded front-end development of the MyInspectionBuddy iOS app using Expo Go, integrating Python Flask backend and FDA/internal data sources to optimize environmental inspection workflows.
- Designed and implemented a panorama-to-cube-map algorithm using OpenCV, enabling stereoscopic 3D image capture and improving object detection accuracy by 20% in real-world field inspections.
- Embedded stereoscopic images into interactive web environments using Panellum, delivering immersive, plugin-free 3D training simulations accessible directly via browser links.
- Captured 2D projections from stereoscopic images to generate labeled training data for the YOLO object detection model, enhancing automated inspection capabilities.
- Automated medical device recall data pipelines using Python, aligning with state data integrity practices and environmental reporting needs.

Software Engineer Fellow | HeadStarter AI , San Francisco **July 2024 – Sept 2024**

- Developed scalable AI-powered web apps using React.js, Next.js, and OpenAI APIs, implementing features like intelligent Q&A and automated document generation based on MVC architecture.
- Integrated REST and GraphQL APIs to synchronize legacy enterprise data with modern web applications, enhancing system interoperability.

PROJECTS

Car Insurance Predictor |*Python*, *Flask*, *scikit-learn*, *Streamlit*,

- Developed and deployed a machine learning web app to predict car insurance premiums for new and existing drivers using real or realistic insurance data.
- Engineered a fast and interpretable ML pipeline (Linear Regression), with model training, deployment, and API integration ready for public use with no retraining required.

Next AI-Support.io |*Next.js*, *Pinecone*, *OpenRouter API*, *Retrieval-Augmented Generation (RAG)*

- Built an AI chatbot using React.js, Pinecone vector DB, and Retrieval-Augmented Generation (RAG) to deliver contextual Q&A and automated documentation workflows.
- Conducted unit/integration tests using Jest and applied agile sprints to iterate backend services based on continuous stakeholder feedback.

LuxPartyRents – Commercial Equipment Rental Website | Spring Boot, MySQL, JavaScript, Bootstrap, HTML/CSS

- Led development of a full-stack web application using JavaScript and Spring Boot, enabling real-time order processing and inventory management for a real-world client.
- Collaborated with stakeholders to build intuitive UIs using Bootstrap, aligning designs with UX best practices and scaling to support future rental product categories.

LearningTutor.AI | React.js, Vite, Google Gemini API, Tailwind CSS

- Created a full-stack AI learning tutor that generates structured learning paths, daily study schedules, and interactive quizzes for any topic or question.
- Built multiple chat sessions for personalized, persistent learning journeys each session saved and organized automatically.